

IN THE CLAIMS:

Please amend Claims 1-5 as follows.

1. (Currently Amended) A projection type display device comprising:
a plurality of image display elements for performing modulation of,
each of which modulates light rays in accordance with an image signal;
a color synthesizing optical element, having at least comprising a
dichroic membrane, for synthesizing light rays having mutually different wavelength ranges that
have been film including a gradient film in which one of its thickness and refractive index varies
in a substantially horizontal direction, the color synthesizing optical element synthesizing the
light rays modulated by said the plurality of image display elements;
~~a lens group having positive refractive power as a whole and disposed~~
~~between the image display elements and the color synthesizing optical element;~~
~~a projection optical system for projecting an image~~ projecting the light
rays synthesized by the color synthesizing optical element system onto a projection surface; and
~~storage circuit for storing data used to correct brightness irregularity of~~
~~an image projected by the projection optical system; and~~
~~brightness irregularity correcting a signal processing circuit for~~
~~correcting which corrects the image signal such that brightness irregularity in a substantially~~
~~vertical direction of an image projected by the projection optical system on the basis of the data~~
~~stored in the storage circuit is reduced or cancelled.~~

2. (Currently Amended) The projection type image display device
according to Claim 1, further comprising a line memory which stores correction data used in the

signal processing circuit as one-dimensional data of the substantially vertical direction wherein
the dichroic membrane is a gradient membrane in which thickness or a refractive index varies in
a specific direction, and the brightness irregularity correcting circuit corrects an image signal for
each image display element in directions other than the specific direction or in each direction
including the specific direction.

3. (Currently Amended) The projection type image display device
according to Claim 1, further comprising a positive refractive lens disposed between the image
display elements and the color synthesizing optical element, wherein the storage circuit stores
data used to correct the brightness irregularity on a projection surface onto which the image has
been projected, the brightness irregularity caused by the fact that non-parallel rays of light
subjected to condensing by the lens group enter the dichroic membrane
wherein an incident angle onto the dichroic film of the light rays
condensed by the positive refractive lens varies in the substantially horizontal direction.

4. (Currently Amended) The projection type image display device
according to Claim 1 any one of Claims 1, 2 and 3, wherein the dichroic film reflects a first color
light and transmits a second color light, the first color light being one of a red color light, a green
color light and a blue color light with different wavelength regions, and the second color light
being one of the other two lights that are not reflected brightness irregularity correcting circuit
corrects an image signal in each pixel of the image display elements.

5. (Currently Amended) The A projection type image display device comprising:

~~according to any one of Claims 1, 2 and 3, wherein the brightness irregularity correcting circuit corrects an image signal in each pixel area of the image display elements~~

a plurality of image display elements, each of which modulates light rays in a substantially rectangular region having a long side extending in a first direction and a short side extending in a second direction in accordance with an image signal;

a color synthesizing optical element comprising a dichroic film including a gradient film in which one of its thickness and refractive index varies in the first direction, the color synthesizing optical element synthesizing the light rays modulated by the plurality of image display elements;

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a projection optical system projecting the light rays synthesized by the color synthesizing optical element onto a projection surface to display a substantially rectangular image having a long side extending in the first direction and a short side extending in the second direction; and

a signal processing circuit which corrects the image signal such that brightness irregularity in the second direction of the image is reduced or cancelled.

Please add Claims 6-9 as follows.

6. (New) A projection type image display device comprising:

a plurality of image display elements, each of which modulates light rays in accordance with an image signal;

a color synthesizing optical element comprising a dichroic film including a gradient film in which one of its thickness and refractive index varies in a predetermined direction, the color synthesizing optical element synthesizing the light rays modulated by the plurality of image display elements;

a projection optical system projecting the light rays synthesized by the color synthesizing optical element onto a projection surface; and

a signal processing circuit which corrects the image signal by one of each pixel and each pixel area such that brightness irregularity in the predetermined direction of an image projected by the projection optical system is reduced or cancelled.

7. (New) The projection type image display device according to Claim 6, wherein the signal processing circuits corrects the image signal such that the brightness irregularity in the predetermined direction which cannot be corrected by the gradient film is cancelled.

8. (New) The projection type image display device according to Claim 6, further comprising a positive refractive lens disposed between the image display elements and the color synthesizing optical element,

wherein an incident angle onto the dichroic film of the light rays condensed by the positive refractive lens varies in the predetermined direction.

9. (New) The projection type image display device according to Claim 6, wherein the dichroic film reflects a first color light and transmits a second light, the first color

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light being one of a red color light, a green color light and a blue color light with different wavelength regions, and the second color light being one of the other two lights that are not reflected.
